

## REMARKS

Reconsideration of the rejections are hereby requested. A Three Month Extension of Time is submitted herewith.

Claims 40-62 are pending in this application and stand rejected under 35 USC § 102(g) over the sole lost count of patent interference number 105, 406.

The lost count recites:

143. A method of forming a film of crystalline  $\text{YBa}_2\text{Cu}_3\text{O}_7$  comprising:

forming a precursor film comprising barium (Ba), fluorine (F), yttrium (Y) and copper (Cu);

heat-treating said precursor film at a temperature above about 700° C in the presence of oxygen and water vapor at a sub-atmospheric pressure to form a crystalline structure; and

annealing said crystalline structure in the presence of oxygen.

The single independent claim in this case, Claim 40, recites:

A method of producing an oriented oxide superconducting film, comprising:

(a) providing a metal oxyfluoride film on a substrate, said metal oxyfluoride film comprising the constitute metallic elements of an oxide superconductor in substantially stoichiometric proportions;

(b) converting the metal oxyfluoride into the oxide superconductor in a processing gas having a total pressure less than atmospheric pressure under conditions that enable the removal of HF from the film surface.

Pending Claim 40 recites “providing a metal oxyfluoride film on a substrate.” In contrast, the subject matter of the lost count merely recites forming a pre-cursor film comprising barium, fluorine, yttrium and copper.

In Examiner’s “Response to Arguments” on page 2-4, Examiner states that the lost count sets forth heat-treating said precursor film at a temperature above about 700° C in the presence of oxygen and that (1) one of ordinary skill in the art would recognize heat-treating would begin at room temperature and then rise to a temperature of above 700° C; and (2) as the temperature is

increased to 700° C, the precursor with oxygen present will be processed at a temperature of 400° C that will inherently form an oxyfluoride film. Applicant respectfully disagrees.

First, the plain language of the count requires “heat-treating said precursor film *at a temperature above about 700° C.*” The language of the lost count is unambiguous, and does not disclose, teach or suggest heating and/or treating at any temperature other than above about 700° C. Second, heat-treating is defined by the relevant industry as “a scientifically monitored heating and cooling process designed to change the characteristics of a metal, generally making it harder” (*see* <http://blackstonewelding.com/glossary.html>), and one of ordinary skill in the art would not recognize the term “heat-treating” as requiring beginning at room temperature and rising to a temperature of above 700° C.

Examiner simply reiterates his position that “[o]ne of ordinary skill in the art would recognize heat-treating would being [*sic*] at room temperature and then rise to a temperature of above 700° C.” Examiner sets forth no support or rationale for this statement, nor any response to Applicant’s remarks to the contrary set forth above. Examiner bears the burden of setting forth a basis for his definition of “heat-treating.”

However, even assuming, *arguendo*, that one of ordinary skill in the art would recognize the term “heat-treating” in the lost count as requiring beginning at room temperature and rising to a temperature of above 700° C, it does not necessarily follow that the precursor with oxygen present will be altered as furnace temperature passes through 400° C on its way to above 700° C in a way that will inherently form an oxyfluoride film. In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. Nystrom v. TREX Co. Inc., 424 F.3d 1136, 1149 (Fed. Cir. 2005); Hockerson-Halberstadt, Inc. v. Avia Group Int’l, Inc., 222 F.3d 951, 956 (Fed. Cir. 2000). The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. Id. The precursor film of the lost count at issue would have to be decomposed at low temperatures (*e.g.*, < 400°C) for an appropriate amount of time (*e.g.*, to allow for decomposition) in order to form an intermediate metal oxyfluoride film. However, the lost count does not disclose, teach or suggest - either explicitly or implicitly - any amount of time the precursor must be exposed to a

temperature of 400° C that will necessarily form an oxyfluoride film. Examiner has not set forth any basis for an argument otherwise. For example, if one of ordinary skill in the art “heat-treats” the precursor of the lost count beginning at room temperature and heating up to a temperature of above about 700° C, but at a rate too quick to allow for decompensation of the precursor at 400° C, an oxyfluoride film will not necessarily result. Applicant further submits that “[t]o establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. ...’” In re Robertson, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations omitted). Applicant therefore respectfully submits that the method of the lost count does not inherently form an oxyfluoride film, and the lost count is not an appropriate 102(g) reference rejecting the pending claims.

Furthermore, Applicant points out that the Examiner improperly references Applicant’s specification to support the assertion that an oxyfluoride precursor film is formed in the process of the subject matter of the lost count. Since the language of the lost count is unambiguous, it is improper to resort to the specification from which a count originated to construe the count. *See, e.g., Noelle v. Lederman*, 355 F.3d 1343, 1350-51 (Fed. Cir. 2004); *Reece v. Hurst*, 661 F.2d 1222, 1236 (C.C.P.A. 1981).

Examiner states that “the specification is referenced only to demonstrate that the limitations present in the instant application are inherently present in the subject matter of the lost count.” *See* page 3 of Office Action. However, the referenced specifications does the exact opposite - there is no disclosure of or about the specific conditions necessary for heat-treating to cause the formation of an oxyfluoride film *each and every* time, and therefore, the specification does not demonstrate that the limitations present in the instant application are inherently present in the subject matter of the count.

Applicant hereby reiterates the same arguments above as they apply to the pending claim limitations “producing an oriented oxide superconducting film,” “substantially stoichiometric proportions,” “converting a metal oxyfluoride into the oxide superconductor,” and “under conditions that enable the removal of HF from the film surface.” Applicant respectfully submits

that the subject matter of the lost count does not inherently teach these limitations, and the lost count is not an appropriate 102(g) reference to the pending claims.

It is submitted that Claim 40 does not read on, and is therefore not generic to, the subject matter of the lost count as discussed above. Further, it is submitted although the Examiner has not rejected the claims under 35 U.S.C. § 103, independent pending Claim 40 is not obvious in view of the subject matter of the lost count.

For the foregoing reasons, it is submitted that pending Claims 40-62 are not anticipated by, nor rendered obvious over, the subject matter of the lost count in the interference. Early favorable action is requested.

Respectfully submitted,

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